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WOODCOCK WASHBURN LLP (MICROSOFT CORPORATION)			KIM, PAUL	
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2161

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/609,283

Applicant(s)

LEVANONI ET AL.

Examiner

Paul Kim

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 June 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-61 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-50 and 55-61 is/are rejected.
- 7) ☒ Claim(s) 51-54 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 June 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.


SAM RIMELL
PRIMARY EXAMINER

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 27 June 2003.

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. This action is responsive to the following communication: Original Application filed on June 27, 2003.
2. Claims 1-61 are pending. Claims 1, 28, and 55 are independent.

Requirement for Information

3. Applicant and the assignee of this application are required under 37 CFR 1.105 to provide the following information that the examiner has determined is reasonably necessary to the examination of this application.
4. In response to this requirement, and with respect to the Information Disclosure Statement filed on June 27, 2003:
 - a. In the prior art document, "Business Process Execution Language for Web Services" by Andrews, T. et al, please specifically indicate which pages of the prior art are most pertinent to the Applicant's claim(s).
 - b. In the prior art document, "XSL Transformation (XSLT) Version 1.0," please specifically indicate which pages of the prior art are most pertinent to the Applicant's claim(s).
 - c. In the prior art document, "XML Path Language (XPath) 2.0," please specifically indicate which pages of the prior art are most pertinent to the Applicant's claim(s).

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- d. In the prior art document, “XLANG/S-Language Specification, Version 0.55,” please specifically indicate which pages of the prior art are most pertinent to the Applicant’s claim(s).
5. The fee and certification requirements of 37 CFR 1.97 are waived for those documents submitted in reply to this requirement. This waiver extends only to those documents within the scope of this requirement under 37 CFR 1.105 that are included in the applicant’s first complete communication responding to this requirement. Any supplemental replies subsequent to the first communication responding to this requirement and any information disclosures beyond the scope of this requirement under 37 CFR 1.105 are subject to the fee and certification requirements of 37 CFR 1.97.
6. The applicant is reminded that the reply to this requirement must be made with candor and good faith under 37 CFR 1.56. Where the applicant does not have or cannot readily obtain an item of required information, a statement that the item is unknown or cannot be readily obtained may be accepted as a complete reply to the requirement for that item.
7. This requirement is an attachment of the enclosed Office action. A complete reply to the enclosed Office action must include a complete reply to this requirement. The time period for reply to this requirement coincides with the time period for reply to the enclosed Office action.

Drawings

8. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description:
 - Paragraph 0033, line 11 – “Keyboard 162”

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Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

9. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description:

- Figure 1, Element 16 – "Keyboard"
- Figure 2A, Element 210 - "5USD"
- Figure 2A, Element 212 – "John Smith"
- Figure 2A, Element 2011 – "Author"
- Figure 3B, Element 348
- Figure 9, Element 916

Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

10. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

11. **Claims 9, 18-21, 23-27, 36, 45-48, and 50-61** rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

12. **Claim 9** recites “a fragment” in line 3 of the claim. It is unclear whether this is intended to be the same as or different from “fragments” in line 2 and “said fragments” in line 3.

13. **Claim 18** recites “each query” in lines 7-8 of the claim. It is unclear whether this is intended to be the same as or different from “at least one query” in line 2 and “said at least one query” in lines 5-6 of the claim.

14. **Claim 19** recites “a value node” in lines 4-5 and 8 of the claim. It is unclear whether this is intended to be the same as or different from “node” in line 3 of the claim. Additionally, claim 19 recites “a container node” in lines 4, 6, and 8. It is unclear whether this is intended to be the same as or different from “container node” in line 3 of the claim.

15. **Claim 20** recites “a current token” in line 2 of the claim. It is unclear whether this is intended to be the same as or different from “tokens” in lines 3 and 5 of claim 18. Additionally, claim 20 recites “query” in lines 3-4 of the claim. It is unclear whether this is intended to be the same as or different from “query” in lines 2 and 5-6 of claim 18.

16. **Claim 21** recites “particular query” in lines 2-3 of the claim. It is unclear whether this is intended to be the same as or different from “query” in lines 2 and 5-6 of claim 18.

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17. **Claims 23-27, 36, 45-48, and 50-61** contain similar types of deficiencies as those described with respect to the above claims, the number a nature of which is too numerous to mention each individually. It is incumbent upon Applicant to ensure any amendment addresses the deficiencies of claims 23-27, 36, 45-48, and 50-61 in addition to those specifically noted with respect to the above claims.

Claim Rejections - 35 USC § 101

18. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

19. **Claims 1-27** are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The claimed invention as a whole must accomplish a practical application. That is, the claimed invention must produce a “useful, concrete and tangible result.” State Street, 149 F.3d at 1373, 47USPQ2d at 1601-02. However, the above claims lack the tangibility requirement and therefore are rejected.

Claim Rejections - 35 USC § 102

20. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

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21. **Claims 1-5, 7, 9-10, 13-14, 16-17, 28-32, 34, 36-37, 40-41, 43-44, and 55-60** are rejected under U.S.C. 102(e) as being anticipated by Bookman et al (U.S. Patent No. 6,801,938, hereinafter referred to as BOOKMAN), filed on June 19, 2000, and issued on October 5, 2004.

22. Regarding **independent claims 1 and 28**, BOOKMAN teaches:

A method (also a computer-readable medium having computer-executable instructions) for processing a data stream {See BOOKMAN, col. 2, lines 24-24, wherein this reads over "a method is provided for processing a continuous stream of data"} embodying a hierarchically structured document {See BOOKMAN, col. 5, line 7-10, wherein this reads over "the continuous data source may be a Web server that outputs a log of information about requests issued to the Web server"; and lines 26-28, wherein this reads over "[d]ata relating to a transaction may be . . . in a markup language format such as SGML, HTML, XML, or other markup language"}, said method comprising:

partitioning said data stream into fixed length segments {See BOOKMAN, col. 2, lines 7-9, wherein this reads over [b] partitioning data into segments"; and col. 5, lines 23-25, wherein this reads over "[d]ata relating to a transaction, for example, may have a variable or fixed length"} utilizing said hierarchical structure to determine a length of each fixed length segment {See BOOKMAN, col. 5, lines 23-25, wherein this reads over "[d]ata relating to a transaction, for example, may have a variable or fixed length"} ; and

processing said fixed length segments in a pipeline fashion {See BOOKMAN, Figure 4; and col. 9, lines 44-45, wherein this reads over "system 301 may operate on one or more streams of data using a parallel pipeline"}.

23. Regarding **dependent claim 2 and 29**, BOOKMAN teaches:

A method (also a computer-readable medium) in accordance with claim 1, further comprising converting said hierarchically structured document into said data stream {See BOOKMAN, col. 1, line 66 – col. 2, line 3, wherein this reads over "the transaction data may be segmented and processed in a data flow arrangement", and wherein "data flow arrangement" reads on "data stream"}.

24. Regarding **dependent claim 3, 16, 30, and 43**, BOOKMAN teaches:

A method (also a computer-readable medium) in accordance with claim 2, wherein said act of converting comprises converting said hierarchically structured document formatted in a transport protocol into said data stream {See

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BOOKMAN, col. 7, lines 26-30, wherein this reads over "the continuous data source 101 produces the continuous stream of data 102. As an example, the continuous data source 101 may be an HTTPD server that produces data regarding requests received by the HTTPD server, and the server saves this data into a log"}.

Since an HTTPD ("Hypertext Transfer Protocol Daemon") is simply a HTTP server, an HTTPD would "use HTTP to serve up HTML documents and any associated files and scripts when requested by a client" {See *Microsoft Computer Dictionary, 5th Edition, p. 259-260, definitions of "HTTPD" and "HTTP server"*}. Therefore, the Office takes Official Notice that the HTTPD would, as an HTTP server, necessarily convert and format the data in HTTP ("Hypertext Transfer Protocol") form.

25. Regarding **dependent claim 4, 17, 31, and 44**, BOOKMAN teaches:

A method (also a computer-readable medium) in accordance with claim 3, wherein said transport protocol comprises at least one of a hypertext transport protocol (HTTP) and a file transport protocol (FTP) {See *BOOKMAN, col. 7, lines 26-30, wherein this reads over "the continuous data source 101 produces the continuous stream of data 102. As an example, the continuous data source 101 may be an HTTPD server that produces data regarding requests received by the HTTPD server, and the server saves this data into a log"}.*

26. Regarding **dependent claim 5 and 32**, BOOKMAN teaches:

A method (also a computer-readable medium) in accordance with claim 1, wherein said act of processing comprises decoding said fixed length segments {See *BOOKMAN, col. 5, lines 54-56, wherein this reads over "[t]ransactional semantics 103 are applied by the segmenter 104 to the continuous stream of data 102 to identify segments in the continuous stream of data"*}.

27. Regarding **dependent claim 7 and 34**, BOOKMAN teaches:

A method (also a computer-readable medium) in accordance with claim 5, further comprising parsing said decoded fixed length segments {See *BOOKMAN, col. 5, lines 40-42, wherein this reads over "[t]ransactional semantics 103 define a function of one or more fields of one or more records of the continuous stream of data"; col. 5, lines 56-58, wherein this reads over "[t]he continuous stream of data 102 may be partitioned according to these identified segments in many*

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ways”; and col. 9, lines 61-63, wherein this reads over “results of these import processes may repartition the data stream”}.

28. Regarding **dependent claim 9 and 36**, BOOKMAN teaches:

A method (also a computer-readable medium) in accordance with claim 7, further comprising:

partitioning said parsed fixed length segments into fragments {See BOOKMAN, col. 5, lines 56-58, wherein this reads over “[t]he continuous stream of data 102 may be partitioned according to these identified segments in many ways”; and col. 9, lines 61-63, wherein this reads over “results of these import processes may repartition the data stream”}; and

storing said fragments in a storage medium {See BOOKMAN, col. 9, lines 24-25, wherein this reads over “results 310 may be a real-time stream of records that may be stored in a database”}, wherein a size of a fragment is determined in accordance with characteristics of said storage medium {See BOOKMAN, col. 5, lines 23-26, wherein this reads over “[d]ata relating to a transaction, for example, may have a variable or fixed length”; and col. 9, lines 32-47, wherein this reads over “a C++ framework is defined that includes components or objects for processing data of data streams. . . . Server program 510 manages execution of the data processing application 107 according to the user configuration file 513. This configuration file 513 describes underlying computer system resources”}.

29. Regarding **dependent claim 10 and 37**, BOOKMAN teaches:

A method (also a computer-readable medium) in accordance with claim 9, wherein said storage medium comprises a database {See BOOKMAN, col. 11, lines 22-27, wherein this reads over “[s]erver 503 may, for example, store results 108 into one or more databases 512 associated with server 503”}.

30. Regarding **dependent claim 13 and 40**, BOOKMAN teaches:

A method (also a computer-readable medium) in accordance with claim 9, said act of processing comprising:

retrieving said fragments from said storage medium {See BOOKMAN, col. 9, lines 24-25, wherein this reads over “results 310 may be a real-time stream of records that may be stored in a database”; and col. 9, lines 28, wherein this reads over “performing parallel accesses to records in the database”}; and

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serializing said retrieved fragments into fixed length segments {See BOOKMAN, Figure 3; and col. 9, lines 29-40, wherein this reads over “[a] system that processes multiple parallel data sources. . . Without such an architecture 301, log file information must be consolidated from the multiple sources and then processed in a serial manner, or multiple processes must individually process the separate streams of data. . . . In the latter case, a programmer explicitly manages the separate parallel processes that process the individual streams and consolidates individual stream data”}.

31. Regarding **dependent claim 14 and 41**, BOOKMAN teaches:

A method (also a computer-readable medium) in accordance with claim 9, further comprising encoding said serialized fixed length segments {See BOOKMAN, Figure 3; and col. 9, lines 29-40, wherein this reads over “[a] system that processes multiple parallel data sources. . . Without such an architecture 301, log file information must be consolidated from the multiple sources and then processed in a serial manner, or multiple processes must individually process the separate streams of data. . . . In the latter case, a programmer explicitly manages the separate parallel processes that process the individual streams and consolidates individual stream data”; and col. 9, lines 61-63, wherein this reads over “results of these import processes may repartition the data stream and reallocate different portions of the data stream to different data processing operators”}.

32. Regarding **independent claim 55**, BOOKMAN teaches:

A system for processing a data stream embodying a hierarchically structured document, said system comprising {See BOOKMAN, col. 9, lines 14-16, wherein this reads over “data processing application 107 may be configured to process multiple continuous data streams”};

a receive pipeline for {See BOOKMAN, col. 9, lines 58-63, wherein this reads over “system 301 may process any number of parallel data streams, and include any number of parallel pipelines”};

receiving said data stream {See BOOKMAN, col. 9, lines 45-47, wherein this reads over “segmenter 104 may accept one or more continuous data streams”};

partitioning said data stream into fixed length segments {See BOOKMAN, col. 2, lines 7-9, wherein this reads over “[b] partitioning data into segments”; and col. 5, lines 23-25, wherein this reads over “[d]ata relating to a transaction, for example, may have a variable or

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fixed length”} utilizing said hierarchical structure to determine a length of each fixed length segment {See BOOKMAN, col. 5, lines 23-25, wherein this reads over “[d]ata relating to a transaction, for example, may have a variable or fixed length”};

processing said fixed length segments in a pipeline fashion {See BOOKMAN, Figure 4; and col. 9, lines 44-45, wherein this reads over “system 301 may operate on one or more streams of data using a parallel pipeline”}; and

providing said processed fixed length segments to a storage medium {See BOOKMAN, col. 9, lines 24-25, wherein this reads over “results 310 may be a real-time stream of records that may be stored in a database”};

said storage medium coupled to said receiving pipeline and coupled to a transmit pipeline {See BOOKMAN, col. 1, lines 66-67, wherein this reads over “[g]iven a continuous source of data relating to transactions, the transaction data may be segmented and processed”}; and

said transmit pipeline for {See BOOKMAN, col. 9, lines 58-63, wherein this reads over “system 301 may process any number of parallel data streams, and include any number of parallel pipelines”};

receiving processed data from said storage medium {See BOOKMAN, col. 9, lines 24-25, wherein this reads over “results 310 may be a real-time stream of records that may be stored in a database”; and col. 9, lines 28, wherein this reads over “performing parallel accesses to records in the database”};

processing fixed length segments in a pipeline fashion {See BOOKMAN, Figure 4; and col. 9, lines 44-45, wherein this reads over “system 301 may operate on one or more streams of data using a parallel pipeline”}.

33. Regarding **dependent claim 56**, BOOKMAN teaches:

A system in accordance with claim 55, further comprising:

a first mapping component coupled to said receive pipeline for converting said hierarchically structured document into said data stream {See BOOKMAN, col. 1, line 66 – col. 2, line 3, wherein this reads over “the transaction data may

be segmented and processed in a data flow arrangement”, and wherein “data flow arrangement” reads on “data stream”}; and

a second mapping component coupled to said transmit pipeline for converting a processed data stream into a processed hierarchically structured document {See BOOKMAN, col. 7, lines 27-38, wherein this reads over “the server saves this data into a log. A separate application . . . periodically creates a new log file into which the HTTPD server writes data. For example a new log file may be created for each day”}.

34. Regarding **dependent claim 57**, BOOKMAN teaches:

A system in accordance with claim 56, wherein said hierarchically structured document and said processed hierarchically structured document are formatted in accordance with a transport protocol {See BOOKMAN, col. 7, lines 27-38, wherein this reads over “the server saves this data into a log. A separate application . . . periodically creates a new log file into which the HTTPD server writes data. For example a new log file may be created for each day”}.

35. Regarding **dependent claim 58**, BOOKMAN teaches:

A system in accordance with claim 55, said receive pipeline comprising:

a decoder for decoding said fixed length segments {See BOOKMAN, col. 5, lines 54-56, wherein this reads over “[t]ransactional semantics 103 are applied by the segmenter 104 to the continuous stream of data 102 to identify segments in the continuous stream of data”}; and

a parser coupled to said decoder for parsing said decoded fixed length segments {See BOOKMAN, col. 5, lines 40-42, wherein this reads over “[t]ransactional semantics 103 define a function of one or more fields of one or more records of the continuous stream of data”; col. 5, lines 56-58, wherein this reads over “[t]he continuous stream of data 102 may be partitioned according to these identified segments in many ways”; and col. 9, lines 61-63, wherein this reads over “results of these import processes may repartition the data stream”}.

36. Regarding **dependent claim 59**, BOOKMAN teaches:

A system in accordance with claim 55, said transmit pipeline comprising:

a serializer for converting data received from said storage medium into fixed length segments {See BOOKMAN, Figure 3; and col. 9, lines 29-40, wherein this reads over “[a] system that processes multiple parallel data sources. . . Without such an architecture 301, log file information must be consolidated

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from the multiple sources and then processed in a serial manner, or multiple processes must individually process the separate streams of data. . . . In the latter case, a programmer explicitly manages the separate parallel processes that process the individual streams and consolidates individual stream data”}; and

an encoder coupled to said serializer for encoding said serialized fixed length segments {See BOOKMAN, col. 9, lines 61-63, wherein this reads over “results of these import processes may repartition the data stream and reallocate different portions of the data stream to different data processing operators”}.

37. Regarding **dependent claim 60**, BOOKMAN teaches:

A system in accordance with claim 55, wherein:

said receive pipeline partitions said fixed length segments into fragments {See BOOKMAN, col. 5, lines 56-58, wherein this reads over “[t]he continuous stream of data 102 may be partitioned according to these identified segments in many ways”; and col. 9, lines 61-63, wherein this reads over “results of these import processes may repartition the data stream”}; and

said storage medium stores said fragments therein {See BOOKMAN, col. 9, lines 24-25, wherein this reads over “results 310 may be a real-time stream of records that may be stored in a database”}.

Claim Rejections - 35 USC § 103

38. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

39. **Claims 6, 15, 33, and 42** are rejected under 35 U.S.C. 103(a) as being unpatentable over

BOOKMAN, in view of Dasgupta (U.S. Patent No. 6,886,014, hereinafter referred to as

DASGUPTA), filed on July 15, 1998, and issued on April 26, 2005.

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BOOKMAN teaches the limitations of claims 1-5, 7, 9-10, 13-14, 16-17, 28-32, 34, 36-37, 40-41, 43-44, and 55-60 above.

BOOKMAN differs from the claimed invention in that BOOKMAN fails to disclose a method which comprises of multipurpose mail extensions (MIME) decoding (claims 6 and 33).

BOOKMAN differs from the claimed invention in that BOOKMAN fails to disclose a method which comprises of multipurpose mail extensions (MIME) encoding (claims 15 and 42).

40. Regarding **dependent claims 6 and 33**, BOOKMAN, in combination with DASGUPTA, discloses a method (also a computer-readable medium) which comprises of MIME decoding *{See DASGUPTA, col. 2, lines 60-67, wherein this reads over "[t]he resultant document . . . requires a subsequent MIME decoding upon receipt"}*.

The combination of the inventions disclosed in BOOMAN and DASGUPTA would disclose a method which comprises of MIME decoding. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the above invention suggested by BOOKMAN by combining it with the invention disclosed by DASGUPTA.

One of ordinary skill in the art would have been motivated to do this modification so that the method could decode the MIME formatted serialized fixed length segments.

41. Regarding **dependent claims 15 and 42**, BOOKMAN, in combination with DASGUPTA, discloses a method (also a computer-readable medium) which comprises of MIME encoding *{See DASGUPTA, col. 2, lines 60-67, wherein this reads over "[i]n accordance with the MIME format, when a reference locators is found in a document, the object that corresponds to the reference locator is encoded and embedded directly into the document"}*.

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The combination of the inventions disclosed in BOOMAN and DASGUPTA would disclose a method which comprises of MIME encoding. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the above invention suggested by BOOKMAN by combining it with the invention disclosed by DASGUPTA.

One of ordinary skill in the art would have been motivated to do this modification so that the method could encode the serialized fixed length segments into MIME format.

42. **Claims 8 and 35** are rejected under 35 U.S.C. 103(a) as being unpatentable over BOOKMAN, in view of Mandler et al (USPGPUB No. 2001/0049675, hereinafter referred to as MANDLER), filed on June 4, 2001, and published on December 6, 2001.

BOOKMAN teaches the limitations of claims 1-5, 7, 9-10, 13-14, 16-17, 28-32, 34, 36-37, 40-41, 43-44, and 55-60 above.

BOOKMAN differs from the claimed invention in that BOOKMAN fails to disclose a method (also a computer-readable medium) which comprises of extensible markup language (XML) parsing (claims 8 and 35).

43. Regarding **dependent claims 8 and 35**, BOOKMAN, in combination with MANDLER, discloses a method (also a computer-readable medium) which comprises of extensible markup language (XML) parsing *{See MANDLER, Para. 0037, wherein this reads over "[t]he system also includes an XML parser linked to the file system engine that retrieves structural information of XML documents, the XML parser further retrieving at least one of elements, attributes and respective values thereof from the XML documents"}*.

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The combination of the inventions disclosed in BOOMAN and MANDLER would disclose a method which comprised of using XML parsing. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the above invention suggested by BOOKMAN by combining it with the invention disclosed by MANDLER.

One of ordinary skill in the art would have been motivated to do this modification so that XML documents may be parsed or partitioned into fixed length segments.

44. **Claims 11-12, 38-39, and 61** are rejected under 35 U.S.C. 103(a) as being unpatentable over BOOKMAN, in view of Davis et al (USPGPUB No. 2002/0133516, hereinafter referred to as DAVIS), filed on December 22, 2000, and published on September 19, 2002.

BOOKMAN teaches the limitations of claims 1-5, 7, 9-10, 13-14, 16-17, 28-32, 34, 36-37, 40-41, 43-44, and 55-60 above.

BOOKMAN differs from the claimed invention in that BOOKMAN fails to disclose a method for creating a database table having queries over documents and fragments of data (claims 11, 38, and 61).

BOOKMAN differs from the claimed invention in that BOOKMAN fails to disclose a method of retrieving both a database table and fragments of a database table (claims 12 and 39).

45. Regarding **dependent claims 11, 38, and 61**, BOOKMAN, in combination with DAVIS, disclose a method (also a computer-readable medium) which comprises of creating a database table, having:

meta data associated with the document {See BOOKMAN, col. 7, lines 14-16, wherein this reads over “[a] parallel data set generally includes a name . . . and metadata”; and DAVIS, Para. 0240, wherein this reads over “[a] MetaStore Manager 710 that provides an interface to a database 712, that stores the meta-information about the assets stored in the file system”};

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queries over the document and respective results {See DAVIS, Para. 0239, wherein this reads over “[t]he source and sink servlets allow fragment dependency store 716 to retrieve document fragments from the file system 714”};

a first fragment of the document {See DAVIS, Para. 0044, wherein this reads over “a content management system allows maximal reuse of information and data through the composition of XML fragments”; Para. 0051, wherein this reads over “relevant documents fragments”; and Para. 0249, wherein this reads over “the metastore 712 is implemented as a DB2/UDB database. In one embodiment, the metastore 712 is based on a fixed set of DB/2 tables for all fragment types, but can be extended to include specific table(s) for different fragments”}; and

locations within the database and sizes of all fragments of the document other than the first fragment {See BOOKMAN, col. 7, lines 14-19, wherein this reads over “defining information such as configuration information . . . indicating where the data is stored”; and DAVIS, Para. 0249, wherein this reads over “the metastore 712 is implemented as a DB2/UDB database. In one embodiment, the metastore 712 is based on a fixed set of DB/2 tables for all fragment types, but can be extended to include specific table(s) for different fragments”}; and

storing the database table in the database {See DAVIS, Para. 0249, wherein this reads over “the metastore 712 is implemented as a DB2/UDB database. In one embodiment, the metastore 712 is based on a fixed set of DB/2 tables for all fragment types, but can be extended to include specific table(s) for different fragments”}.

The combination of the inventions disclosed in BOOMAN and DAVIS would disclose a method for creating a database table having the following: metadata associated with the document, queries over documents, and fragments of data. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the above invention suggested by BOOKMAN by combining it with the invention disclosed by DAVIS.

One of ordinary skill in the art would have been motivated to do this modification so that a fragments of large messages may be stored properly, allowing for subsequent access and retrieval by a user.

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46. Regarding **dependent claims 12 and 39**, BOOKMAN, in combination with DAVIS, discloses a method (also a computer-readable medium) of retrieving the database table from the database; and utilizing the retrieved database table to retrieve all fragments of the document *{See DAVIS, Para. 0239, wherein this reads over “[t]he source and sink servlets allow fragment dependency store 716 to retrieve document fragments from the file system 714 and write assembled pages to it”}*.

The combination of the inventions disclosed in BOOMKAN and DAVIS would disclose a method of retrieving fragments of document from a database table. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the above invention suggested by BOOKMAN by combining it with the invention disclosed by DAVIS.

One of ordinary skill in the art would have been motivated to do this modification so that the fragments may be serialized and merged back into the original document.

47. **Claims 18, 20-21, 45, and 47-48** are rejected under 35 U.S.C. 103(a) as being unpatentable over BOOKMAN, in view of Martinez-Guerra et al (U.S. Patent No. 6,523,172, hereinafter referred to as MARTINEZ), filed on February 19, 1999, and issued on February 18, 2003.

BOOKMAN teaches the limitations of claims 1-5, 7, 9-10, 13-14, 16-17, 28-32, 34, 36-37, 40-41, 43-44, and 55-60 above.

BOOKMAN differs from the claimed invention in that BOOKMAN fails to disclose a data stream comprising of tokens (claims 18, 20-21, 45, and 47-49).

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48. Regarding **dependent claims 18 and 45**, BOOKMAN, in combination with

MARTINEZ, discloses a method (also a computer-readable medium) comprising of:

receiving a signal indicative of at least one query over said document {See MARTINEZ, col. 3, lines 63-66, wherein this reads over "Parser-translator implementations in accordance with certain embodiments of the present invention interface dynamically with other systems and/or repositories to query for information about objects"; and col. 4, line 40, wherein this reads over "reading an input stream encoding the business rule"}, wherein said data stream comprises tokens indicative of a structure of said hierarchically structured document {See MARTINEZ, col. 7, lines 65-66, wherein this reads over "Input Stream: A flow of information including tokens to be recognized and parsed" };

evaluating said tokens in the passing data stream in response to said at least one query {See MARTINEZ, col. 4, lines 47-51, wherein this reads over "the input stream evaluating includes: recognizing tokens from the input stream, parsing the tokens, and translating a sequence of the tokens to produce the operating directive"};

identifying {See MARTINEZ, col. 10, lines 44-45, wherein this reads over "[token recognizer] matches the input stream against a set of tokens encoded in grammar } fixed length segments of said data stream to be utilized to satisfy each query {See BOOKMAN, col. 2, lines 7-9, wherein this reads over "[b] partitioning data into segments"; and col. 5, lines 23-25, wherein this reads over "[d]ata relating to a transaction, for example, may have a variable or fixed length"}; and

individually processing each fixed length segment to satisfy said at least one query {See MARTINEZ, col. 10, lines 49-53, wherein this reads over "Parser 12 accepts tokens from token recognizer . . . and builds an internal representation of the translation of the input stream"}.

In order for the method to determine whether the supplied queries are satisfied by a node, a token must be read. Therefore, by evaluating the input stream as disclosed by the invention in MARTINEZ, the combination of BOOKMAN and MARTINEZ would allow for the method to evaluate tokens in a data stream and further identify whether a fixed length segment of the data stream can be utilized by the query.

One of ordinary skill in the art would have been motivated to do this modification so that when using a hierarchical document streaming reading interface, the provided sequence of tokens may be used in determining whether any of the tokens satisfy any of the queries.

49. Regarding **dependent claims 20 and 47**, BOOKMAN, in combination with MARTINEZ, discloses a method (also a computer-readable medium) comprising of comparing a current token of a fixed length segment *{See MARTINEZ, col. 4, lines 47-51, wherein this reads over "the input stream evaluating includes: recognizing tokens from the input stream, parsing the tokens, and translating a sequence of the tokens to produce the operating directive"}*, as it is received to every query, and determining if any of the queries are satisfied by the token *{See MARTINEZ, col. 10, lines 49-53, wherein this reads over "Parser 12 accepts tokens from token recognizer . . . and builds an internal representation of the translation of the input stream"}*.

In order for the method to determine whether the supplied queries are satisfied by a node, a token must be read. Therefore, by evaluating the input stream as disclosed by the invention in MARTINEZ, the combination of BOOKMAN and MARTINEZ would allow for the method to evaluate tokens in a data stream and further identify whether a fixed length segment of the data stream can be utilized by the query.

One of ordinary skill in the art would have been motivated to do this modification so that when using a hierarchical document streaming reading interface, the provided sequence of tokens may be used in determining whether any of the tokens satisfy any of the queries.

50. **Dependent claims 21 and 48** are rejected because the "if" condition need not be affirmatively satisfied, and therefore do not carry any patentable weight.

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51. **Claims 19 and 46** are rejected under 35 U.S.C. 103(a) as being unpatentable over BOOKMAN, in view of MARTINEZ, and in further view of Schrader et al (USPGPUB No. 2004/0123277, hereinafter referred to as SCHRADER), filed on December 18, 2002, and published on June 24, 2004.

BOOKMAN teaches the limitations of claims 1-5, 7, 9-10, 13-14, 16-17, 28-32, 34, 36-37, 40-41, 43-44, and 55-60 above.

BOOKMAN and MARTINEZ teaches the limitations of claims 18, 20-21, 45, and 47-48 above.

BOOKMAN differs from the claimed invention in that BOOKMAN fails to disclose a method (also a computer-readable medium) wherein a data stream comprises a sequence of nodes, and where the nodes are a container node or a value node (claims 19 and 46).

52. Regarding **dependent claims 19 and 46**, BOOKMAN, in combination with SCHRADER, discloses a method (also a computer-readable medium) wherein:

the data stream comprises a sequence of nodes:

a node is one of a container node and a value node {See GOLDMAN, col. 3, lines 5-14, wherein this reads over “[t]he hierarchy comprises a hierarchy of a number of derived containers . . . each belonging to one of a number of container definition node types, include attribute-based container definition nodes, value-based container definition nodes”};

each token is indicative of at least one of a container node and a value node {See MARTINEZ, col. 7, lines 65-66, wherein this reads over “Input Stream: A flow of information including tokens to be recognized and parsed”; and col. 4, lines 47-51, wherein this reads over “the input stream evaluating includes: recognizing tokens from the input stream, parsing the tokens, and translating a sequence of the tokens to produce the operating directive.”};

a value node comprises a value associated with said document {See GOLDMAN, col. 3, lines 11-12, wherein this reads over “value-based container definition nodes”}; and

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a container node comprises at least one of attributes of the document {See GOLDMAN, col. 3, lines 10-11, wherein this reads over “attribute-based container definition nodes”}; and

an ordered set of at least one of a container node and a value node {See GOLDMAN, col. 3, lines 5-14, wherein this reads over “[t]he hierarchy comprises a hierarchy of a number of derived containers . . . each belonging to one of a number of container definition node types, include attribute-based container definition nodes, value-based container definition nodes”}.

The combination of the inventions disclosed in BOOKMAN and GOLDMAN would disclose a method (also a computer-readable medium) wherein the data stream comprise of a sequence of nodes. GOLDMAN discloses a method for accessing an information repository by organizing the information stored into a hierarchy. Moreover, the claimed invention in GOLDMAN would allow for the receiving of a data stream from a data repository, or a database, and organizing the data stream in an object containing nodes, specifically container nodes and value nodes. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the above invention suggested by BOOKMAN by combining it with the invention disclosed by GOLDMAN.

One of ordinary skill in the art would have been motivated to do this modification because the hierarchically structure data would not necessitate entry of the large documents into memory, minimizing the number of passes over the data needed.

53. **Claims 22 and 49** are rejected under 35 U.S.C. 103(a) as being unpatentable over BOOKMAN, in view of MARTINEZ, and in further view of Rys et al (USPGPUB No. 2003/0101194, hereinafter referred to as RYS), filed on November 1, 2001, and published on May 29, 2003.

BOOKMAN teaches the limitations of claims 1-5, 7, 9-10, 13-14, 16-17, 28-32, 34, 36-37, 40-41, 43-44, and 55-60 above.

MARTINEZ teaches the limitations of claims 18, 20-21, 45, and 47-49.

BOOKMAN differs from the claimed invention in that BOOKMAN fails to disclose a method wherein the query is formatted in an Xpath-type language, and the document is formatted in an XML-type language (claims 22 and 49).

54. Regarding **dependent claims 22 and 49**, BOOKMAN, in combination with MARTINEZ and RYS, discloses a method (also a computer-readable medium) wherein the query is formatted in an XPath-type language *{See RYS, Para. 0033, wherein this reads over “[t]hese views can then be queried using Xpath queries”}*, and the document is formatted in an XML-type language *{See RYS, Para. 0032, wherein this reads over “data is exported . . . by way of a hierarchical self-describing format such as extensible markup language (XML)”}; and Para. 0033, wherein this reads over “XML schema describes the structure of an XML document”}*.

The combination of the inventions disclosed in BOOKMAN, MARTINEZ, and RYS would disclose a method (also a computer-readable medium) wherein the query is formatted in an Xpath-type language, and the document is formatted in an XML-type language. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the above invention suggested by BOOKMAN by combining it with the inventions disclosed by MARTINEZ and RYS.

One of ordinary skill in the art would have been motivated to do this modification because the use of XML and Xpath queries in parsing the data allows the parser to perform piece-meal parsing and on-the-fly-evaluation of queries.

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55. **Claims 23 and 50** are rejected under 35 U.S.C. 103(a) as being unpatentable over BOOKMAN, in view of Ferrel et al (U.S. Patent No. 5,907,837, hereinafter referred to as FERREL), filed on November 17, 1995, and issued on May 25, 1999.

BOOKMAN teaches the limitations of claims 1-5, 7, 9-10, 13-14, 16-17, 28-32, 34, 36-37, 40-41, 43-44, and 55-60 above.

BOOKMAN differs from the claimed invention in that BOOKMAN fails to disclose a method (also a computer-readable medium) comprising of a read cache and a prefetch set (claims 23 and 50).

BOOKMAN differs from the claimed invention in that BOOKMAN fails to disclose

56. Regarding **dependent claims 23 and 50**, BOOKMAN, in combination with FERREL, discloses a method (also a computer-readable medium) comprising:

determining if a selected read query is in a read cache {See FERREL, col. 35, lines 64-67, wherein this reads over “[a service] provides a user query or search object query 1010 to a request queue Each query in the request queue 1008 is read by a request manager”; and col. 36, lines 12-14, wherein this reads over “[f]or the case where the query cache 1004 does not contain the query”}, wherein:

a read query is utilized to read a fixed length segment of passing stream data {See FERREL, col. 38, lines 35-40, wherein this reads over “user query is fed to the search server which provides one or more subqueries to the database. . . . The database server 276 uses the indexes of the query to access tables . . . stored in a number of database partitions”; and BOOKMAN, Figure 3; and col. 9, lines 29-40, wherein this reads over “[a] system that processes multiple parallel data sources. . . . Without such an architecture 301, log file information must be consolidated from the multiple sources and then processed in a serial manner, or multiple processes must individually process the separate streams of data. . . . In the latter case, a programmer explicitly manages the separate parallel processes that process the individual streams and consolidates individual stream data”};

While BOOKMAN fails to disclose a “read query,” FERREL discloses an invention that utilizes queries to search tables of a database which are stored in a number of database partitions. By applying the claimed invention found in BOOKMAN, one would be able to consolidate information from multiples sources, specifically database partitions, into an individual stream data. And so, the combination of the inventions in BOOKMAN and FERREL would allow for a method of utilizing a query to read a fixed length segment of a passing data stream. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the above invention suggested by BOOKMAN by combining it with the inventions disclosed by FERREL.

One of ordinary skill in the art would have been motivated to do this modification so that a query may be utilized to read a fixed length of a data stream.

if said selected read query is in said read cache, indicating if said selected query is satisfied {See FERREL, col. 36, lines 3-5, wherein this reads over “[r]esults collection 1016 checks the query cache 1004 to determine whether results corresponding to the current query exist”};

if said selected read query is not in said read cache, add said selected read query to a prefetch set {See FERREL, col. 36, lines 12-14, wherein this reads over “where the query cache 1004 does not contain the query, the supervisor 1014 partitions the query 1010 into a number of subqueries”; and lines 16-18, wherein this reads over “database queries are now queued for execution against database servers”};

While BOOKMAN fails to disclose a “read cache” in its claimed invention, FERREL discloses a method that comprises of determining whether each query is found in the query queue. Furthermore, FERREL discloses an method which, if the query is found in the query cache, a results collection checks to determine whether results corresponding to the current query exist, and if the query is not found in the query cache, the query is inserted into the queue.

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Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the above invention suggested by BOOKMAN by combining it with the inventions disclosed by FERREL.

One of ordinary skill in the art would have been motivated to do this modification so that a query would not have to be processed if the query cache is found to already hold results for that query.

obtaining {See FERREL, col. 4, line 67 to col. 5, line 1, wherein this reads over “the layout includes a search query; retrieving content satisfying the search query from the publication storage”} at least one fixed length segment of passing stream data {See FERREL, col. 38, line 41, wherein this reads over “[t]he database is segmented into partitions for efficiency”; and BOOKMAN, Figure 3; and col. 9, lines 29-40, wherein this reads over “[a] system that processes multiple parallel data sources. . . Without such an architecture 301, log file information must be consolidated from the multiple sources and then processed in a serial manner, or multiple processes must individually process the separate streams of data. . . . In the latter case, a programmer explicitly manages the separate parallel processes that process the individual streams and consolidates individual stream data”; and

consuming said at least one fixed length segment of passing stream data until all unresolved queries in said prefetch set are resolved {See FERREL, col. 36, lines 12-20, wherein this reads over “database queries are now queued for execution against database servers. A pool of worker threads 1026 service the workunit queues”}.

Where there are queries in queue or prefetch set, such queries would need to be processed in order for a result set to be returned. Therefore, in attempting to retrieve content satisfying the query, the combination of BOOKMAN and FERREL would allow for obtaining a fixed length segment of passing stream data in resolving the requested query.

One of ordinary skill in the art would have been motivated to do this modification so that a query may be utilized to read a fixed length of a data stream in the retrieval of data from a data source.

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Allowable Subject Matter


57. Claims 51-54 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

58. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paul Kim whose telephone number is (571) 272-2737. The examiner can normally be reached on M-F, 9am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Safet Metjahic can be reached on (571) 272-4023. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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SAM RIMELL
PRIMARY EXAMINER